

REPORT ON INSECT CONTROL

LASSEN NATIONAL FOREST

HALL'S FLAT PROJECT

BLACK'S MT. UNIT.

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II

SUMMARY

Forest:	Lassen National Forest
Project:	Halls Flat
Unit:	Blacks Mtn.
Duration:	Oct. 21, 1934 - January 11, 1935
Species:	Ponderosa & Jeffery Pine
Insects:	D. Brevicornis, D. Monticola, D. Jefferyi, and Melanophila (species).
Method Used:	Peeling and burning.
Total Acreage spotted:	18,820
Total trees spotted:	3,814
Total Ft. B. M. Spotted:	4,379,090
Total acreage treated:	15,590
Total trees treated:	3,320
Total Ft. B. M. Treated:	3,886,300
Total Amount Expended:	\$23,100.61
Total cost per acre treated:	\$1.48
Total " " tree "	\$6.96
Total " " M.Ft.B.M. "	\$5.94

III

INTRODUCTION

On the basis of Dr. K. A. Salmen's preliminary survey report and recommendations the Black's Mt. and Little Valley Units of the Halls Flat Project were selected for insect control work. Priority was given to the Black's Mt. Unit because of the higher timber values involved and because its boundaries embraced the Experimental Forest of the U.S.F.S. Experiment Station.

Spotting began October 22 with one four-man crew, consisting of one compassman and three spotters. Another crew of spotters were started Oct. 16. Treating began on October 24 with eight crews of two men each and the number of crews increased as rapidly as men were sent out from Susanville.

In view of the heavy infestation on this area the work was planned on a 20-man camp basis, with the hope that the area could be spotted and treated before the snow became too deep to work.

Treatment, which consisted of felling, peeling, and burning continued until January 7, 1935 when the snow depth increased from 8 inches to 36 inches making it impossible to continue treating.

IV

LOCATION OF UNIT AREA

The Black's Mt. Unit lies within Townships 32 and 33 north and ranges 7 & 8E. M.D.M. The boundary on the north was the crest of the ridge extending from Harvey Mt. to Patterson Mt. and thence along the township line to the section line between Sec. 3 & 4, T. 33N., R. 7E., thence SW to the Gray Valley Road, keeping to the upper limits of patented land. Gray Valley and Harvey Valley formed the south boundary up to Burgess Sprgs. from which point the

boundary went above Sec. 24, T. 33N., R.3E. which was mostly cutover by the F. G. S. Co., thence north along the range line between ranges 8 & 9 to the center of Section 12, thence west to Harvey Mt. This area drains to the south into Harvey Valley and Gray's Valley.

V

TIMBER TYPES

The largest part of the area is pure Ponderosa Pine with a very small percentage of Jeffery Pine, mostly along the upper slopes. There was an occasional Sugar Pine along the ridge towards Patterson Mt. and also varying amounts of Incense Cedar and White Fir on the higher slopes. Because of the very small percentage of Jeffery Pine no attempt has been made to segregate it in the tables or calculations.

VI

INSECTS

The primary insects on this control unit are: *D. brevicornis*, *D. monticolae*, *D. Jefferyi*, and *Melanophila* (species), of which the two former were the most important from the standpoint of prevalence, and timber losses, on this area. Losses caused by *D. Jefferyi* and *Melanophila* (species) were relatively few.

Predatory species were below normal from what would be expected of an infestation of this extent. Of those observed, *Tannochila* was the most prevalent. Very few clerids were found.

VII

INFESTATION ON A PER SECTION BASIS

The total number of sections spotted were 26.3 and the average number of infested trees per section was 145.0

VIII

CAMP ORGANIZATION

To avoid the expense of building a 90-man camp to work the Black's Mt. Unit it was decided to use the buildings at the Halls Flat CCC Camp. This location also had the nearest available water supply. As soon as the U. S. Army moved out the Insect Control Crews moved in and started work. Personnel consisted of a Camp Foreman, 2 Woods Bosses, 8 Spotters, 3 Cooks, 1 Baker, 3 Plunkies, 1 Saw Filer, 1 Auto Mechanic, 4 Truck Drivers, 1 Bull Cook, and 32 Treating Crews of 2 men each.

Transportation consisted of four $1\frac{1}{2}$ ton Chevrolet trucks and six Chevrolet pickups.

IX

SPOTTING

Spotting the infested trees was accomplished by two four-man crews. Each crew consisted of a compassman who also mapped the topographic features as well as the location and species of trees that were infested.

Due to the reduction in the number of treaters it was felt that one crew of spotters could keep ahead so the number was reduced from 8 to 4.

About the middle of November there were several storms which gradually increased the depth of snow in the timber to approximately 14 inches. The snow laden trees as well as the snow on the ground retarded the progress of the spotting.

X

TREATING

The method used exclusively was felling, peeling, and burning. During the first three weeks of treating it was necessary to build a fire trail

around each tree to confine the burning. After that it was necessary to shovel the snow away from the tree so as to get a 100% burn on the infested bark.

At the start of our operations the nearby logging camps were in operation so that the men available as treaters were not very experienced nor efficient. These camps closed down the last of November and by the third of December we had replaced the poorer members of the treating crews with better men and also reduced the number of crews from 33 to 24, and eliminated one crew of spotters. Immediately the output per crew was raised and in less than a week the 24 sets were turning in more scale of treated trees than the 33 sets had turned in previously.

A large percentage of the trees treated were late attacks on which the bark was green and hard to peel.

Anticipating that the roads would become nearly impassable after the storms started, the work was planned so that the farther areas were treated first. The area was fairly well served by roads, and the maximum distance which the crews had to walk was $1\frac{1}{2}$ miles. With the help of Dr. Salman we made a short section of road which saved about three miles of haul. Our farthest haul was into Section 12, T. 33N., R. 8E. and was about 19 miles from camp, taking the trucks $1\frac{1}{4}$ to $1\frac{1}{2}$ hrs. to make the trip. We were successful in completing this part of the area before the storms made the roads dangerous and at the last were hauling the men about seven or eight miles.

XI

INFESTATION BY SECTIONS - BLACK'S MT. UNIT

T. 33N., R. 9E.	Acres	% of trees	Vol. Bd.Ft.	Acres	% of trees	Vol. Bd.Ft.
	Spotted	Spotted	Spotted	Treated	Treated	Treated
Sec. 5.	260	45	78,120	260 ✓	45	78,120
" 6.	480	47	69,220	470 ✓	46	67,380
" 7.	640	272	353,340	620 ✓	263	242,430
" 8.	640	84	140,250	640 ✓	84	140,250
" 9.	640	138	193,340	640 ✓	138	193,340
" 10.	640	139	153,710	640	139	153,710
" 11.	480	42	84,100	480	42	84,100
" 12.	320	13	31,120	320	13	31,120
" 13.	640	278	313,090	640	278	313,090
" 14.	640	278	328,090	640	278	328,090
" 15.	640	204	203,960	640	204	203,960
" 16.	640	171	166,160	640 ✓	171	166,160
" 17.	640	106	167,360	640 ✓	106	167,360
" 18.	640	101	137,530	600 ✓	94	122,430
" 19.	640	112	180,670	640 ✓	112	180,670
" 20.	640	83	120,680	640 ✓	83	120,680
" 21.	480	98	109,420	480 ✓	98	109,420
" 22.	160	5	3,750	160	5	3,750
" 23.	560	73	91,300	560	73	91,300
" 28.	640	57	70,380	640 ✓	57	70,380
" 29.	640	50	75,410	640 ✓	50	75,410
" 30.	640	152	183,880	640 ✓	152	183,880
" 31.	640	251	232,480	640 ✓	251	232,480
" 32.	640	107	102,570	640 ✓	107	102,570
T. 32N., R. 8E.						
Sec. 5.	160	4	3,900	160 ✓	4	3,900
" 6.	320	47	54,160	320 ✓	47	54,160
T. 33N., R. 7E.						
Sec. 1	640	257	250,730	60	31	26,590
" 12	640	86	99,910	600	69	76,950
" 13	640	165	170,370	120	26	30,510
" 24	320	122	116,590	60	19	29,210
" 25	480	227	193,500	400	124	157,110
TOTALS	16,820	3,814	4,379,090	15,590	3,320	3,886,300

XII

COSTS - BLACKS MT. UNIT

1. Transportation	\$16.42
2. Groceries & meat	2,578.75
3. Salaries	
A. Cookhouse	1,853.55
B. Treaters	11,362.63
C. Spotters	1,979.87
D. Overhead	3,470.69
4. Gas, oil, & grease	433.34
5. Motor repairs	253.85
6. Depreciation Motor Equipment	646.87
7. Equipment & supplies	240.16
8. Establishing and breaking camp	206.45
9. Water, from W. P. R. R.	59.87
10. Electricity, from W. P. R. R.	18.16
Total cost	<u>\$23,100.61</u>

SUBSISTENCE COSTS

Salaries, cookhouse	1,853.55
Groceries & Meats	2,578.75
Total costs	<u>\$4,432.30</u>

Total meals served	13,525
Cost per meal, food .....	.191
Cost per meal, labor .....	.137
Total cost per meal .....	.328

Acres spotted	16,820
Number of trees spotted	3,814
M. ft. B. M. spotted	4,379.090
Cost of spotting	\$1979.87
Cost per acre.....	.117
Cost per tree.....	.519
Cost per M. Ft. B. M.....	.452
 Acres treated	 15,590
Number of trees treated	3,320
M. Ft. B. M. treated	3,886.300
Cost of treating	11,362.63
Cost per acre treated .....	.73
Cost per tree treated	3.42
Cost per M. Ft. B. M. treated	2.92
 Total costs on Unit	 \$23,100.61
Cost per acre treated	1.48
Cost per tree treated	6.96
Cost per M. ft. B. M. treated	5.94

Respectfully submitted,

Vance S. Brown

Vance S. Brown

Misc. Foreman, Insect Control
In charge of Project

Approved:

March 7th 1935 Date*P. D. Hanom* Forest Supervisor*Mar 7 '35* Date

Approved:

_____ Date

_____ Regional Forester.

REPORT ON INSECT CONTROL

LASSEN NATIONAL FOREST

HALL'S FLAT PROJECT

LITTLE VALLEY UNIT.

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SUMMARY

Forest:	Lassen National Forest
Project:	Halls Flat
Unit:	Little Valley
Duration:	January 9 to Feb. 22, 1935
Species:	Ponderosa and Jeffrey Pine
Insects:	D.Brevicomis, D. Monticola, D. Jefferyi, and Melanophila (species)
Method of Treating:	Peeling and burning.
Total Acreage Spotted:	3,080
" trees "	2,521
" Ft. B. M. "	1,688,120
" Acreage treated	1,745
" trees "	1,193
" Ft. B. M. "	769,830
Total Amount Expended	\$4,910.58
" cost per A. treated	\$2.81
" " " tree "	\$4.12
" " " M. ft. B. M. treated	\$6.37

III

INTRODUCTION

The Little Valley Unit was selected for control work due to accessibility during winter months as well as the severity of the infestation. It is highly desirable to at least attempt to reduce the insect losses on this area as it is a very accessible, inexpensive logging chance. It is quite probable that a small mill will be built on the Bognuda Ranch in the near future to log this area and adjoining private timber.

Supervisor Hanson and Ranger Brenneis examined the area for a suitable camp site and decided to rent the necessary buildings from Ned Bognuda, whose ranch borders the area on the east.

The necessary equipment and supplies were moved from Halls Flat on January 11, 1935 and work started on some of the buildings, repairing the roofs and boarding up the sides which were open or only screened.

Spotting began January 9 and treating January 22. This amount of intervening time was necessary to permit the spotters to get enough trees spotted ahead so that the treaters would not be too close together. During this period snow and rain storms delayed the spotters several days.

Control work was terminated before the unit was completed.

IV

LOCATION OF UNIT AREA.

After necessary eliminations due to insufficient control funds this unit comprised an area of approximately 5000 acres. It included the ridges and slopes bordering the west side of Little Valley. This entire area drains

to the north and east into Horse Creek, a tributary of Pitt River.

This area is located in T. 34 and 35N., R.7E. M. D. M.

V

TIMBER TYPES

The lower slopes of this area contained a pure stand of Ponderosa Pine, with an occasional Jeffrey Pine. To the south as the elevation increased there was a small and varying amount of Incense Cedar, White Fir, Sugar Pine, and Douglas Fir.

VI

INSECTS

The two most important primary insects on this area were *D. Brevicornis* and *D. Monticola*. *D. Jefferyi* were not numerous. *Melanophila* species were found to be primary in only a relatively few cases.

Predators were observed to be rather few especially in view of the severity of the infestation.

VII.

INFESTATION ON A PER SECTION BASIS

The infestation on this area is truly an epidemic. This was indicated by the tendency toward groups especially in the small and apparently thrifty trees. Data from the spotting records show that there was one infested tree to every 1.22 acres, or stating it differently there were an average of 523.5 trees to the section.

VIII

CAMP ORGANIZATION

Camp was established at Ned Bognuda's Ranch where the Forest Service leased the necessary buildings. These buildings were designed for summer occupancy so that considerable repairing was necessary to make them suitable for winter use.

Personnel consisted of a Camp Foreman, one woods boss, one saw filer, who also took care of wood hauling and water pumping, four spotters, two cooks, one flunkey, one mechanic-truck driver, and ten 2-man treating crews.

Very little transportation was needed at first, due to the proximity of the work to the camp. Later we used five Chevrolet pickups.

IX

SPOTTING

The spotting crew consisted of four men, one compassman and three spotters. Spotting progress was slow due to the heavy infestation and deep snow. The spotters were forced to use snow shoes during all except the last week of their work.

X

TREATING

The peeling and burning method of treatment was used exclusively.

The treating crews were started on the north and lowest part of the area. The snow there was about 14 to 18 inches deep but settled rapidly and in four weeks was nearly all gone. No fire lines were necessary but

considerable shoveling of snow was necessary in order to get a 100% burn.

Many of the infested trees were small enough so that the treaters were able to cut them into short lengths, pile, and burn them.

Approximately two-thirds of the area spotted was treated when orders were received to close down the operation.

XI.

TABLES SHOWING INFESTATION BY SECTIONS

LITTLE VALLEY UNIT.

T.35N., R.7E	Spotted			Treated		
	Acres	# Trees	Vol. (b.f.t.)	Acres	# trees.	Vol. Bd. Ft.
Sec. 16	640	242	166,080	# 640	242	166,080
" 21	640	609	387,680	620	556	361,820
" 22	440	299 ⁴³⁰	183,820	# 440	299	183,820
" 26	400	512 ⁸²⁵	303,550	# 40	92	55,630
" 27	640	657	452,830	5	4	2,480
" 34	320	202 ⁴⁰⁴	194,160	---	---	---
TOTALS	3,080	2,521	1,688,120	1,745	1,193	769,830

XII.

COSTS - LITTLE VALLEY UNIT.

1. Transportation	\$22.17
2. Groceries & Meats	694.92
3. Salaries	
A. Cookhouse	542.15
B. Treaters	1,523.85
C. Spotters	668.14
D. Overhead	697.02
4. Gas, oil, & grease	72.50
5. Motor repairs	80.97
6. Depreciation, motor equip.	114.88
7. Equipment & supplies	157.61
8. Establishing and breaking camp	208.45
9. Rent of camp buildings	127.92
Total costs	\$4910.58

SUBSISTENCE COSTS.

Salaries, cookhouse	\$542.15
Groceries & Meats	694.92
Total costs	<u>\$1237.07</u>

Total meals served	3,085
Cost per meal, food .....	.225
Cost per meal, labor .....	.176
Total cost per meal	<u>.401</u>

LITTLE VALLEY UNIT

Acres spotted	3,080
Number of trees spotted.....	2,521
M. Ft. B. M. spotted	1688.120
Cost of spotting	\$668.14
Cost per acre, spotting .....	.22
" " tree " .....	.27
" " M. Ft. B. M. spotting .....	.40
Acres treated	1,745
# of trees treated	1,193
M. Ft. B. M. treated	769.830
Cost of treating	\$1523.85
Cost per acre treated .....	.87
Cost per tree "	1.28
Cost per M. Ft. B. M. treated	1.91
Total costs on unit	\$4,910.58
Cost per acre treated.....	2.81
Cost per tree treated	4.12
Cost per M. Ft. B. M. Treated	6.37

HALLS FLAT PROJECT COSTSBlacks Mt. & Little Valley Units

The following figures are the costs of both the Blacks Mt. and Little Valley Units combined to show the entire project costs.

1. Transportation	\$ 38.59
2. Groceries & Meats	3,273.67
3. Salaries	
A. Cookhouse	2,395.70
B. Treaters	12,886.48
C. Spotters	2,648.01
D. Overhead	4,167.71
4. Gas, oil, & grease	505.84
5. Motor equip. repairs.	314.82
6. Depreciation, motor equip.	761.75
7. Equipment & supplies	397.77
8. Establishing & breaking camp	414.90
9. Rent of camp buildings (Little Valley)	127.92
10. Water, from W. P. R. R. (Black's Mt.)	59.87
11. Electricity, from W. P. R. R. (Black's Mt.)	18.16
Total costs	<u>\$28,011.19</u>

SUBSISTENCE COSTS

Salaries, cookhouse	\$2,395.70
Groceries & meats	3,273.67
Total costs	<u>\$ 5,669.37</u>

Total meals served	16,610
Cost per meal, food .....	.197
Cost per meal, labor .....	.144
Total cost per meal .....	.341
Acres spotted	20,220
# trees spotted	6,387
M. Ft. B. M. spotted	6,113.02
Cost of spotting	\$2,648.01
Cost per acre .....	.13
Cost per tree .....	.41
Cost per M. Ft. B. M. ....	.43

A. res treated	17,335
# of trees treated	4,513
M. Ft. B. M. treated	4,656.130
Cost of treating	12,886.48
Cost per acre treated .....	.74
Cost per tree treated	2.85
Cost per M. Ft. B. M. treated	2.76
 Total costs on Project	 \$28,011.19
Cost per acre treated	1.61
Cost per tree treated	6.21
Cost per M. Ft. B. M. treated	6.02

Respectfully submitted,
Vance S. Brown
 Vance S. Brown
 Misc. Foreman, Insect Control
 In charge of Project

Approved:

March 7 1935 Date

P. H. Hanom Forest Supervisor.

Mar 7, 1935 Date

Approved:

_____ Date

_____ Regional Forester.

WEST HALF
Map to accompany report S-Insect Control-Lassen
of March 7, 1935, by Vance S. Brown.

T. 34 N.
T. 33 N.



EAST HALF

Map to accompany report S-Insect Control-Lassen
of March 7, 1935, by Vance S. Brown.



INSECT CONTROL
LASSEN NATIONAL FOREST
CALIFORNIA

MOUNT DIABLO MERIDIAN

BLACK'S MOUNTAIN UNIT

Scale - 8 inches = 1 mile

WINTER 1934 - 35

~ LEGEND ~

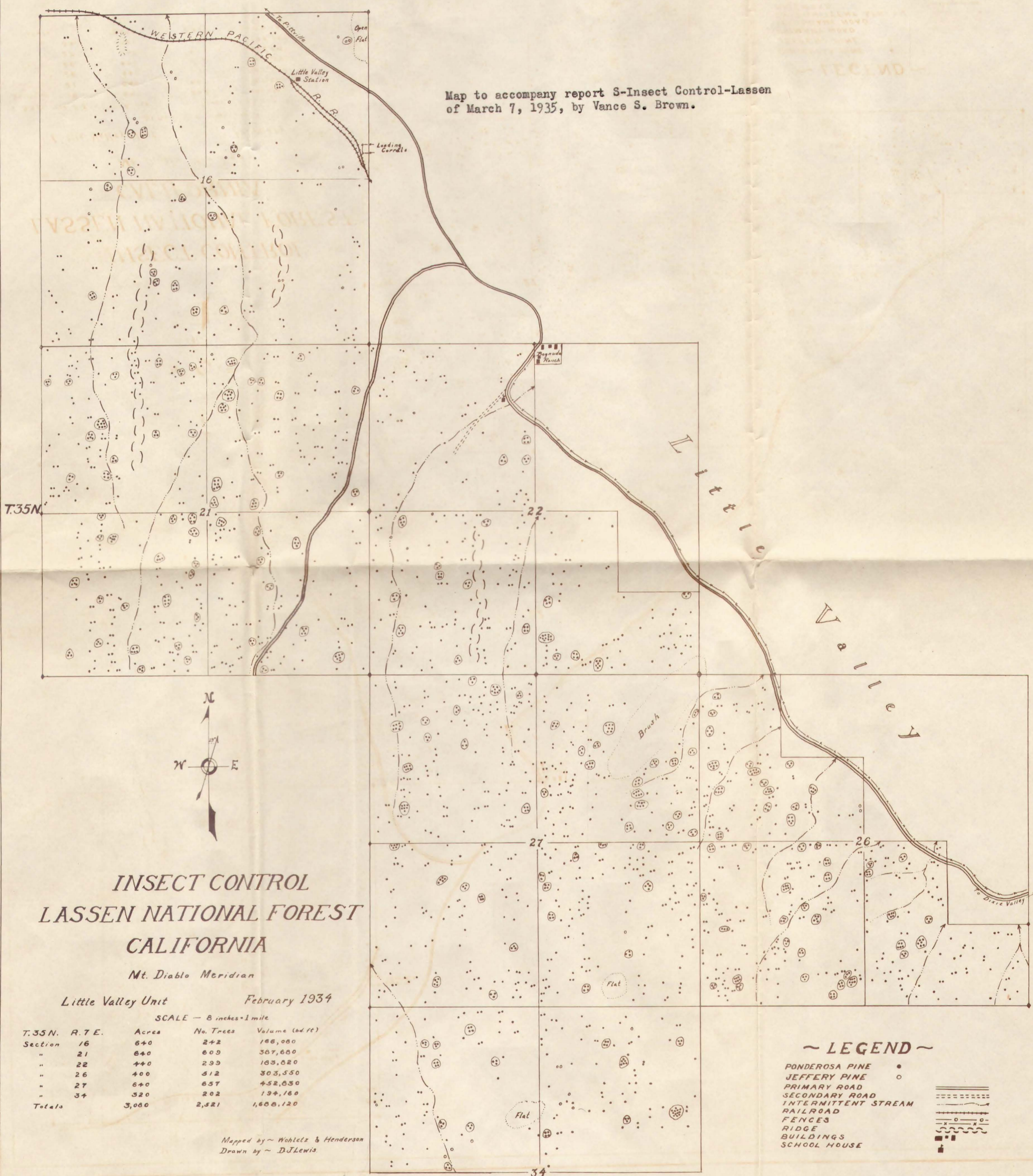
Infested Ponderosa Pine
Infested Jeffrey Pine
Boundary Merchantable Timber
Boundary Experimental Forest
Logging Railroad
Railroad Grade (no steel)
Improved forest Road
Unimproved " "
Intermittent Stream (draw)
Telephone Line
Trail
Fence
Patented Land
Ridge or Divide
Boundaries Burn (1924)

Field Maps by: Hoyer, Henderson, Moore, Winkler
Traced by: R. J. Lamm

~ INFESTATION ~

		Acres	No. Trees	Volume (bd. ft.)
T. 33 N. R. 8 E.	Section 5	260	45	78,120
"	6	480	47	89,220
"	7	640	272	253,340
"	8	640	84	140,280
"	9	640	136	193,340
"	10	640	139	153,710
"	11	480	42	84,100
"	12	320	13	31,120
"	13	640	276	313,090
"	14	640	276	320,090
"	15	640	204	203,960
"	16	640	171	166,160
"	17	640	106	167,360
"	18	640	101	137,530
"	19	640	112	180,670
"	20	640	63	120,660
"	21	480	96	109,420
"	22	160	5	3,750
"	23	560	73	91,300
"	24	640	57	70,380
"	25	640	50	75,410
"	30	640	152	183,880
"	31	640	251	232,480
"	32	640	107	102,570
T. 32 N. R. 8 E.	Section 5	160	4	3,900
"	6	320	47	54,180
T. 33 N. R. 7 E.	Section 1	640	257	250,730
"	12	640	86	99,910
"	13	640	165	170,370
"	24	320	122	116,590
"	25	480	227	193,500
Totals -		16,820	3,814	4,379,090

Map to accompany report S-Insect Control-Lassen
of March 7, 1935, by Vance S. Brown.



INSECT CONTROL
LASSEN NATIONAL FOREST
CALIFORNIA

Mt. Diablo Meridian

Little Valley Unit February 1934

SCALE - 8 inches = 1 mile

T. 35 N.	R. 7 E.	Acres	No. Trees	Volume (cu ft)
Section	16	640	242	186,000
"	21	640	609	367,600
"	22	440	293	163,020
"	26	400	512	303,550
"	27	640	657	452,050
"	34	320	202	134,160
Totals		3,080	2,521	1,600,120

Mapped by ~ Wohletz & Henderson
Drawn by ~ D.J. Lewis

~ LEGEND ~

- PONDEROSA PINE
- JEFFERY PINE
- PRIMARY ROAD
- SECONDARY ROAD
- INTERMITTENT STREAM
- RAILROAD
- FENCES
- RIDGE
- BUILDINGS
- SCHOOL HOUSE